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LKO 03 SEP 2022 No. 1
RECEIVING

GENERAL STUDIES (TEST CODE : 1838)

Name of Candidate	Sumit Kumar Gupta		
Medium Eng./Hindi	English	Registration Number	936769
Center	Lucknow	Date	03/09/2022

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
2	10	
3	10	
4	10	
5	10	
6	10	
7	10	
8	10	
9	10	
10	10	
11	15	
12	15	
13	15	
14	15	
15	15	
16	15	
17	15	
18	15	
19	15	
20	15	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
   उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न–पत्र कोड, विद्यार्थी क्रमांक आदि)।
2. There are **TWENTY** questions printed in **ENGLISH & HINDI**
   इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
3. **All questions are compulsory.**
   सभी प्रश्न अनिवार्य हैं।
4. The number of marks carried by a question/part is indicated against it.
   प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
5. Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other that the authorized one.
   प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न–सह–उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
6. Word limit in questions, if specified, should be adhered to.
   प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
   उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

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EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

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All the Best

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1. The Chalukyan architecture uniquely epitomises the grandeur and hybrid characteristic style of temple building. Elaborate. **(150 words) 10**
चालुक्य स्थापत्य कला विशिष्ट रूप से मंदिर निर्माण की वैभवपूर्ण और संकर अभिलक्षणिक शैली का प्रतीक है। सविस्तार वर्णन कीजिए।

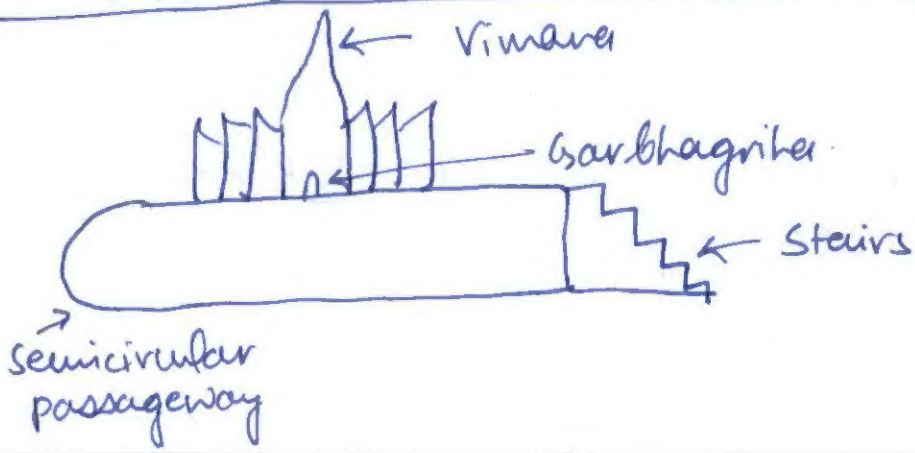
Chalukyan dynasty ruled between 6th century to 12th century and epitomized vesara style of temple building.

Grandeur in temples

(i) large Vimanas were built.

(ii) Semicircular pathways were built along with stairs.

(iii) Matapa and Garbhagriha was there. Eg Badami Temple



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Hybrid characteristics of temple :

(i) It followed Vesara school which was fusion of Dravidian and Nagara school.

(ii) Vimana was copied from Nagara while semicircular passage way from Dravida.

Eg Aihole Temples

(iii) Crucified ground plan was copied from Nagara temple.

(iv) Walls were with intricate designs and mural paintings were there.

Chalukyan Temple signifies rich heritage of India as Pattadakal temple is also UNESCO World Heritage site.

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2. The success or failure of a political movement is not always determined by the achievement of its stated goals. Discuss in light of the Ghadar movement.

(150 words) 10

किसी राजनीतिक आंदोलन की सफलता या विफलता सदैव उसके घोषित लक्ष्यों की प्राप्ति से निर्धारित नहीं होती है। गदर आंदोलन के आलोक में चर्चा कीजिए।

Lala Hardayal Singh was one of the prominent leader who started Ghadr movement.

Success of movement

(i) Setting the tone of revolutionary activities in India ex Sachin Sanyal as their leader.

(ii) Mass involvement of people → grassroot involvement + wide participation.

(iii) Disseminated the idea of British oppression in India.

Stated Goals of Ghadr Movement:

(a) to uproot British government

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through revolutionary activities.

(b) For full Independence of India.

(c) Supply of arms and ammunition for revolution.

Failure

It failed because of the strong spy network of British machinery and major revolutionary leaders were caught before starting the movement.

Yet, the movement started the revolutionary activities and involvement of mass participation in India against Britishers. It helped the people to understand the true meaning for Independence. Hence, it set the tone for other activities such as HSRA etc.

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3. Discuss the ways in which Gandhian conceptualisation of Sarvodaya influenced Vinoba Bhave's Bhoodan movement. (150 words) 10
उन तरीकों की विवेचना कीजिए जिनसे सर्वोदय की गांधीवादी अवधारणा ने विनोबा भावे के भूदान आंदोलन को प्रभावित किया था।

Gandhiji believed in Sarvodaya which meant 'rise of all' in the society.

Conceptualization of Sarvodaya

(i) believed in the upliftment of every person in the society.

(ii) Involvement of People : in ushering Sarvodaya.

(iii) Evoke empathy from people for their countrymen.

(iv) Equal distribution of resources : for everyone in the society.

Vinoba Bhave's Bhooda Movement :

(i) Encourage people to donate their

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land property to tenants/peasants with no land.

(ii) Altruistic model of land distribution.

(iii) Mass awareness regarding selfless characteristics of landholders for distributing their lands.

(iv) Gandhiji's Sarvodaya was used:-

↳ to evoke people's participation towards land distribution and its donation.

↳ Empathy and sympathy towards fellow countrymen.

Thus, overall 4 million sq. km. was distributed through Bhoodan Movement and ushered Sarvodaya with Antyodaya [rise of every last person]

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4. Bring out the evidences, which led to the Plate Tectonics Theory. Also, discuss how this theory explains the movement of plates.

(150 words) 10

उन साक्ष्यों को उजागर कीजिए जिनसे प्लेट विवर्तनिकी सिद्धांत का प्रतिपादन हुआ। साथ ही, विवेचना कीजिए कि यह सिद्धांत किस प्रकार प्लेटों की गति की व्याख्या करता है।

Plate tectonics are large, irregular slabs of rocks formed beneath earth crusts.

Evidences which led to Plate Tectonic Theory :-

(i) Zig-saw fit : of the other continents. ex South African, Madagascar, America etc.

(ii) Fossil :- found on the either side of the continent.
ex Dinosaur's fossil found in Karnataka & Africa.

(iii) Placer deposits :- found at the coastal area of Ghana & Afria.

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(iv) Glacial Tillite is found on either side of the African and American continents.

Explaining the movement of Plates

(i) Polar fleeing force due to movement of earth.

(ii) Convectional energy which moves the plate. [ex] energy released from volcanoes, earthquakes etc.

Thus, this theory helped scientist to understand the plate movements.

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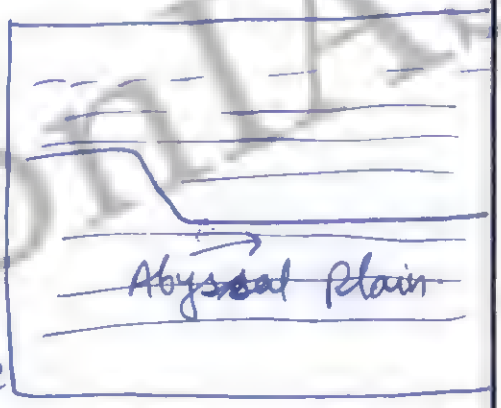
5. Give an account of the formation of Abyssal Plains and highlight the relief features found on these plains. **(150 words) 10**
वितलीय मैदानों के निर्माण का विवरण दीजिए और इन मैदानों पर पाए जाने वाले उच्चावच संबंधी लक्षणों पर प्रकाश डालिए।

Abyssal Plains are formed below the oceanic water formed due to continental shelf and other reasons. Eg covers 80% of ocean plain.

Formation :
when the lava from the oceanic ridge settle down and solidifies inside water.



Relief features

(i) Trenches : formed due to volcanic activities Eg Mariana Trench.

(ii) Canyon : Submarine canyons are formed. Eg Hudson Canyon.

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(iii) Mountain [underwater] : formed at deep sea plains. Eg some mountains are as high as Mt. Everest.

(iv) Submarine Plateau : formed at abyssal plane.

(v) Ocean Ridges etc.

Thus, abyssal plain helps in understanding the ocean floor and the evolution of earth's crust.

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6. What are the geographical and climatic conditions required for tea cultivation? In this context, discuss the reasons for the introduction of tea cultivation in the Duars region of the Himalayas by the British.
(150 words) 10

चाय की खेती के लिए आवश्यक भौगोलिक और जलवायविक दशाएं क्या हैं? इस संदर्भ में, अंग्रेजों द्वारा हिमालय के दुआर क्षेत्र में चाय की खेती शुरू करने के कारणों की विवेचना कीजिए।

India is the second largest producer of tea, second only to china.

Geographical conditions

(i) Should be grown on Hills

(ii) Soil : Alluvial soil with proper drainage and water retention capacity.

Climatic conditions

(i) Cold climate generally having temperature between 10°C to 20°C.

(ii) Adequate rainfall between 100 mm to 200 mm.

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British introduced tea cultivation in duar region because :

(i) Sedimentation of rivers of Ganga accumulated their.

(ii) Rich fertility of soil as sediments accumulated + Availability of Alluvial soil.

(iii) Climatic conditions : supported the tea plantation + adequate rainfall.

(iv) Monoculture Plantation : and utilization of cheap human labour.

Thus, India has the potential to become largest tea producer and exporter of the world.

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7. Briefly bring out the distinction between flash droughts and conventional droughts. Also, examine the reasons behind the increasing vulnerability of India to flash droughts. **(150 words) 10**

आकस्मिक सूखा और पारंपरिक सूखा के मध्य अंतर को संक्षेप में स्पष्ट कीजिए। साथ ही, आकस्मिक सूखे के प्रति भारत की बढ़ती सुभेद्यता के कारणों का परीक्षण कीजिए।

As per IMD, drought is prolonged period of less rainfall making soil infertile having rainfed conditions.

Flash Droughts	Conventional droughts
(I) Happens for a short period of time.	(I) Normally, prolonged period of time.
(II) Disruption in rainfall/ monsoonal pattern.	(II) Normally, widescale disruption and continuously no rainfall.
(III) Region : Nagpur area of MH, eh.	(III) Region include - Rajasthan, MH, Bundelkhand / Chambal region eh.
(IV) Dislocate people temporarily.	(IV) Dislocate people permanently.

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(v) disruption in vegetation growth → affects migratory nature of animals	(v) No vegetation & permanent loss of flora & fauna.
(vi) Usually happens in summer season.	(vi) Prevalent → all whether season.

Reason for Increasing vulnerabilities of flash droughts :

(i) Disruption in Monsoon – due to climate change, ENSO oscillation, Ocean (+ve) dipole etc.

(ii) Heat wave effects – land heat wave disrupts rainfall pattern.

(iii) Heat Island effect – concretization of urban cities → loss of water → scarcity.

(iv) climate change → Increasing GHG.

Steps like Watershed development Program and Net zero goals can avoid flash droughts

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(इस भाग में कुछ ना लिखें)

8. Though various initiatives have been taken to ensure social security for informal workers in India, there still exist gaps which need to be plugged. Discuss. **(150 words) 10**

हालांकि भारत में अनौपचारिक श्रमिकों के लिए सामाजिक सुरक्षा सुनिश्चित करने हेतु विभिन्न पहलें शुरू की गई हैं, फिर भी कुछ कमियां मौजूद है जिन्हें दूर करने की आवश्यकता है। चर्चा कीजिए।

As per NSSO, around 90% of the total workforce belongs to informal workers.

Various Initiatives for Informal workers

(i) Social security Code, 2020 : to ensure social security net.

(ii) E-Sharm Portal - to collect data base for informal workers.

(iii) Pension schemes such as Atal Pension Yojana, Man-dhan Yojana to encourage pension.

(iv) Medical & life insurance : such as Ayushman Bharat etc.

(v) MNREGA - to provide job security.

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Existing Gaps for Informal workers

(i) Job security & Retrenchment problem faced during Covid. As many as 300 million pushed into poverty [Azim Premji Group study]

(ii) Out-of-pocket expenditure in health [48%, National Health Accounts, 2019]

(iii) Income Gap and persisting Inequalities [World Inequalities Report] ~~CEO earns~~

(iv) Exploitation & huge labour pay gap with riskier jobs.

(v) lax implementation of government schemes.

Thus, steps like labour Code is a step in a right direction towards SDG 1 [reducing poverty] and utilizing workforce

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9. Critically assess the government's move on raising the age of marriage of women in India from 18 to 21 years. **(150 words) 10**
भारत में महिलाओं के विवाह की आयु 18 वर्ष से बढ़ाकर 21 वर्ष करने के सरकार के कदम का समालोचनात्मक मूल्यांकन कीजिए।

Recently, the government brough a Bill to raise age of marriage for women from 18 to 21 years.

Positives of raising the age

(i) Gender equality and parity :- as the age of male is 21 years for marriage. [enhances Article 14]

(ii) Avoid child marriage issues - as 40% of rural India still practices child marriage.

(iii) Women Health & reproductive rights :- more autonomy to women.

(iv) Reduce MMR, IMR :- as 53% of women in India is anaemic [National Health Accounts] + current MMR is 132. [NHFS-5]

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(v) More Autonomy : to pursue educational and employment opportunities. [All women's participation in labour work force can increase India's GDP 27%, IMF]

Concerns associated with raising the age of marriage :

(i) Less deterrance effect as previous law failed to curb child marriage issues.

(ii) May make existing child marriages illegal and unlawful.

(iii) Economic burden on rural poor as young bride requires less dowry for marriage.

(iv) Autonomy towards marriage gets affected.

Instead consultation with ~~any~~ every stakeholders should be done and incorporate Jaya Jaitely recommendations.

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10. Reservation for locals in private sector has again brought the debate around regionalism into focus. In this context, examine whether regionalism is a threat to national integration. **(150 words) 10**

निजी क्षेत्रक में स्थानीय लोगों के लिए आरक्षण के मुद्दे ने क्षेत्रवाद के इर्द-गिर्द होने वाली बहस को पुन: केंद्र में ला दिया है। इस संदर्भ में, परीक्षण कीजिए कि क्या क्षेत्रवाद राष्ट्रीय एकता के लिए खतरा है।

Recently, Haryana government brought a bill to reserve 75% of seats for locals in private sector.

Regionalism as a threat to national Integration :

(i) Promotes 'son-of soil' doctrine of the state.

(ii) Perpetuates parochialism and false sense of superiority. Ex Maratha reservation in Maharashtra.

(iii) Cooperative federalism also gets affected.

(iv) Affects common harmony and brotherhood → fraternity.

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(v) largescale violence and harassment.
Eg Workers in Gujarat was expelled and beaten from Bihar.

Regionalism may promote national Integration :

(i) Sync in Administration while implementing policies.
(ii) Competitive federalism : more welfare measures → increased standard of living.
(iii) Common harmony and better utilization of local human resources.
(iv) Mileage to political parties : promote check & balances in government policies.

However, regionalism should be taken as a pinch of salt and common fraternity should be Promoted as per Preamble

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(इस भाग में कुछ ना लिखें)

11. Explain how agricultural surplus, growth of crafts and trade, and growing population led to the second urbanisation in ancient India.

(250 words) 15

व्याख्या कीजिए कि किस प्रकार कृषि अधिशेष, शिल्प और व्यापार की वृद्धि तथा बढ़ती जनसंख्या के कारण प्राचीन भारत में द्वितीय नगरीकरण हुआ है।

Second phase of urbanization begun when Indian products found acceptance in foreign lands prompting trade with foreign countries.

Agricultural surplus

(i) Development of traders in ancient India [ex] Sethus etc.

(ii) Surplus ~~trade~~ agriculture → moved to urban towns and cities → increased trade.

(iii) Migration of traders and people in search of market.

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Craft & Trade

(i) Search for market and migration of people to urban areas.

(ii) Establishing barter system for seamless exchange of crafts & trade materials.

(iii) Flow of money → expansion of urban cites.

Growing Population

(i) People moved from rural in search of opportunities in jobs.

(ii) Migration due to resource constraints in rural areas.

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(iii) Growing trade in urban areas.

Thus all three combined to bring second phase of urbanization in modern India.

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12. India of the 18th century failed to make progress economically, culturally and socially at a pace, which would have saved the country from collapse. Comment. **(250 words) 15**

18वीं शताब्दी का भारत आर्थिक, सांस्कृतिक और सामाजिक रूप से उस गति से प्रगति करने में विफल रहा, जो देश को पतन से बचा सकता था। टिप्पणी कीजिए।

In 18th century, India witnessed ~~rise and~~ fall of dynasties like Mughals, Marathas, Awadh while rise of Britishers.

Failure in Economic Progression :

(i) Largescale war : affected the royal treasures. Ex 3rd battle of Panipat.

(ii) Diversion of human resources towards army : instead of economic activities.

(iii) Trade surplus : got affected due to prevalent war.

(iv) failed pace of industrialization in India as western countries

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were adopting industrialized economy.

Failure of cultural Progression

(i) Limited patronage : to artisans and handmade paintings etc.

(ii) Cultural homogeneity : got affected due to internal rivalry and competition for throne.

(iii) Advent of Britishers : sense of inferiority in India's rich culture.

Failure of Social progression

(i) Internal rivalry : increased for the throne. → further disintegration.
Eg Disintegration of Marathas.

(ii) Prevalence of untouchability and limited social mobility.

(iii) Oppression against women was prevalent.

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(iv) Britisher's policy of subsidiary alliance etc. → further divided India on social lines. [ex] Divide and Rule Policy.

Simultaneously, advent of British India Company ensured collapse of India through
→ Battle of Panipat [1757]
→ Battle of Plassey [1756]
→ Battle of Buxar [1764]
→ ensured British India Rule and large scale exploitation [Era of Darkness, Shashi Tharoor].

Further, drain of India's wealth, rice bowl of India's exploitation, capturing of India by British ensured collapse of India in British hands.

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(इस भाग में कुछ ना लिखें)

13. The withdrawal of the Civil Disobedience Movement triggered a two-stage debate on the strategic course of India's freedom struggle. Elucidate.
(250 words) 15

सविनय अवज्ञा आंदोलन की वापसी ने भारत के स्वतंत्रता संघर्ष की रणनीतिक कार्यप्रणाली के संबंध में दो-चरणों वाली बहस को आरंभ कर दिया। स्पष्ट कीजिए।

Civil Disobedience Movement was withdrawn in April, 1934 due to Gandhi-Irwin Pact and arrest of major leaders subsequently in 1933.

Reason for withdrawal :

(I) Lost tempo of mass movement due to prolonged period.

(II) Arrest of major leaders by Lord Linlithgow.

(III) Earlier Gandhi-Irwin Pact of 1931.

Thus, the withdrawal triggered a two-stage debate on course of India's freedom.

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(1) First debate :

(i) Regarding joining the British government politically.

Second debate :

involve in leftish - socialist - radicalist activities.

First - stage debate :

(i) Participated in the election to work indirectly for India's freedom movement.

(ii) Stalling government proposals against Indians.

(iii) Constructive programme through governmental policies for tenants, prisoners etc.

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second stage route:

(I) headed by Nehru - Bose, fused national radical elements with freedom struggle.

(II) Passing of fundamental and economic rights of people.

(III) Individual heroics and revolution was emphasized.

(IV) Involvement of masses for the revolutionary and socialist activities

Thus, finally, those two streams got merged after IInd world war broke and started Quit India Movement in 1942.

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14. Throw light on the causes, course and outcomes of the Civil War, which followed the Russian Revolution. Also, bring out the reasons behind the Bolshevik victory. **(250 words) 15**

रूसी क्रांति के बाद हुए गृहयुद्ध के कारणों, गतिविधियों और परिणामों पर प्रकाश डालिए। साथ ही, बोल्शेविक विजय के कारणों को भी स्पष्ट कीजिए।

Russian Revolution [1917] created another set of problems in the Russian region setting the tone for Civil War.

Causes

(i) Tussle: between various parties emerged after Russian revolution.

(ii) Largescale violence and disinmination perpetrated after Russian revolution.

(iii) Fight to control power and economy among various leaders. ~~over resources~~

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Course

(i) Bolshevik party worker started movement to drive out other dissents and other party workers.

(ii) Largescale & widespread violence occurred.

Outcome

Bolshevik Party emerged victorious after the Civil War.

Reason behind Bolshevik Party victory :

(i) Strong party foundation established during Russian revolution.

(ii) strong command of leaders in the form of Lenin.

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(iii) Strong Institutional capacity and force to crush opposite's party.

(iv) Disintegration of dissents and strict actions taken by Bolshevik party.

Thus, Bolshevik Party established one-party regime in Russia [the then USSR] after civil war.

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15. What are Glacial Lake Outburst Floods (GLOFs)? Highlighting the susceptibility of the Himalayan region to GLOFs, state the measures required to address them. (250 words) 15

ग्लेशियल लेक आउटबर्स्ट फ्लड्स (GLOFs) क्या हैं? GLOFs के प्रति हिमालयी क्षेत्र की सुभेद्यता पर प्रकाश डालते हुए, इनके समाधान के लिए आवश्यक उपायों का उल्लेख कीजिए।

As per World Meteorological Organisation [WMO], Glacial Lake Outburst Floods when water from glacier lakes and moraines are released suddenly. [ex] Chamoli Glacial outburst, [2021].

~~Reasons~~ Features of GLOFs

(i) Sudden release and discharge of water.

(ii) Lasts only for few hours.

(iii) Increasing flow of downstream water.

Susceptibility of the Himalayan region to GLOFs:

(i) Known as the 'Twin-Towers of Asia and a third pole → it has

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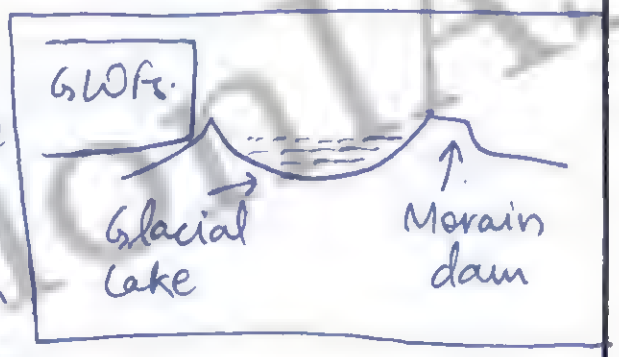
large-scale glaciers.

(ii) Phenomenon of Glacier retreat can increase GLOFs.

(iii) Effects of climate change and GHG emissions & melting of glaciers.

(iv) Increased vulnerabilities due to tourism and urbanization in Himalayan areas.



Measures to address them

(i) Vulnerable zone mapping & by the ~~NDMA~~ National Disaster Management Authorities.

(ii) Aperture - Radar : usage to monitor the cloud burst and glacial

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retreat.

(iii) Early Warning System : to identify the GLOFs & phenomena.

(iv) Hydrological data sharing with neighbouring countries.

(v) Sustainable Development of Himalayan region. [ex] National Sustainable Mission on Himalayan Region.

(vi) SECURE Himalayas initiatives to reduce vulnerabilities.

(vii) Shifting of Tourism and local during monsoonal seasons. [ex] Amarnath Yatra stoppage.

Thus, multi-pronged approach with the help of IMD, ISRO data sharing, and NDMA can mitigate the damages.

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16. Highlighting the significance of critical minerals, provide an account of their distribution in India and the world. **(250 words) 15**

महत्वपूर्ण खनिजों के महत्व को रेखांकित करते हुए, भारत और विश्व में उनके वितरण का विवरण प्रस्तुत कीजिए।

Critical minerals are the building blocks of modern-day technologies such as solar-panel, EV-battery etc. These includes, Lithium, Zironium etc.

Significance of critical minerals

(i) ~~Used~~ Uses :- in various appliances and modern day technologies [eg] Mobile phones, EV, solar panel etc.

(ii) Strategic importance :- as these are limited in nature

(iii) Building blocks of technological appliances → must required

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raw materials.

(iv) Soft diplomacy : as china has largescale control of critical minerals → can cause supply chain disruptions.

Distribution in India

(i) Madanpalle ~~at~~ region of Karnataka.
↳ Lithium ion reserve

(ii) Monazite found in the Kerala's coast.

(iii) Rajasthan : region may comprise of lithium ~~regio~~ reserve.

(iv) Jammu region and Ladakh : huge reserve of rare-earth minerals. [eg] Thorium etc.

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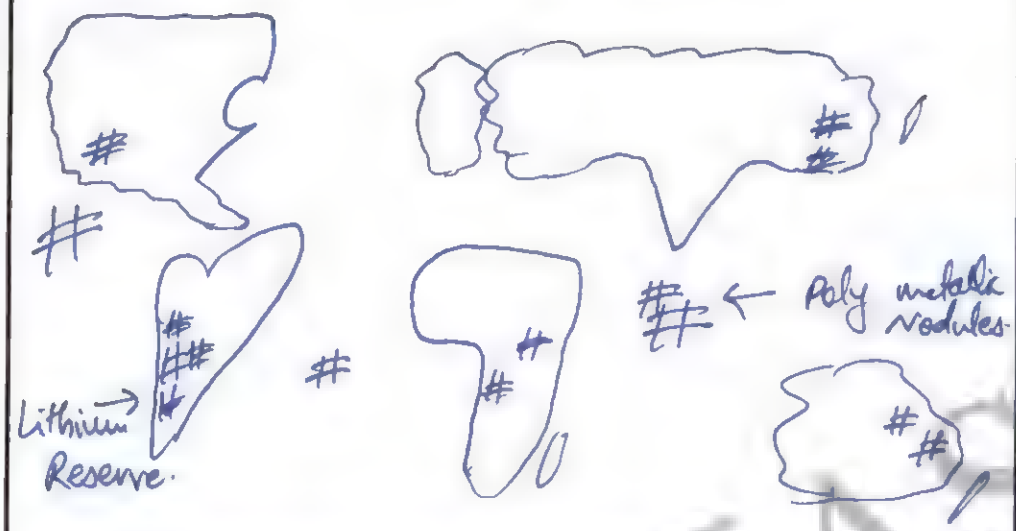

World Distribution of critical minerals

Lithium Reserve :- Chile-Paraguay region → 'Golden reserve' for lithium.
↳ Australia & China.

Polymetallic Nodules :- Parts of Indian Ocean, American Coast, Atlantic region.

Recently, critical mineral supply group was formed owing to its strategic importance. [2022]. India must endeavour to join to avoid supply side disruption.

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17. Highlighting the importance of ice sheets, discuss the likely impact of their melting on the planet with special focus on India. (250 words) 15

हिम चादरों के महत्व पर प्रकाश डालते हुए, भारत के विशेष संदर्भ में पृथ्वी पर उनके पिघलने के प्रभाव की विवेचना कीजिए।

As per IPCC, Sixth Assessment ~~Plan~~ Report, melting of ice sheets can become one of the region of sixth mass extinction.

Ice sheets are large blocks of Ice slabs mostly found in Antarctica and Arctic region.

Importance of Ice sheets

(I) Keeps the large reserve of water in forms of glaciers.

(II) Maintains the temperature equilibrium of the earth.

(III) Supports exotic fauna & flora.

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Impact of melting of Ice Sheets

(i) Increased water level of ocean – as melting of ice increases water of the ocean [IPCC].

(ii) Release of Paleolithic virus :- Scientist fears that ice sheet melting may release hibernatic virus and bacteria.

(iii) Submerged coastal countries :- IPCC fears that 50% of Bangladesh etc will be submerged by 2050.

(iv) Disturbed temperature equilibrium :- as cold air from pole region will get affected.

(v) Impact on India :-

S.L. Submergence of coastal states as India has 7500 km coastal

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area.

5.2. Disruption in monsoonal affect :- affecting India's Agri economy. [70% of farmers are fully dependant on monsoon, IMD]

5.3. loss of Marine Ecosystem :- bio-diversity loss along with coral bleaching, kelp forest extinction

5.4. Invasive species threat.

5.5. Seasonal disruption : pattern of season will get affected.

Mitigation Measures

↳ climate change Initiatives [Glasgow summit]

↳ Net zero goals [Panchamrit]

↳ GHG emission stoppage [Paris Goals].

Thus, collaboration and coordination of world is the need of the hour.

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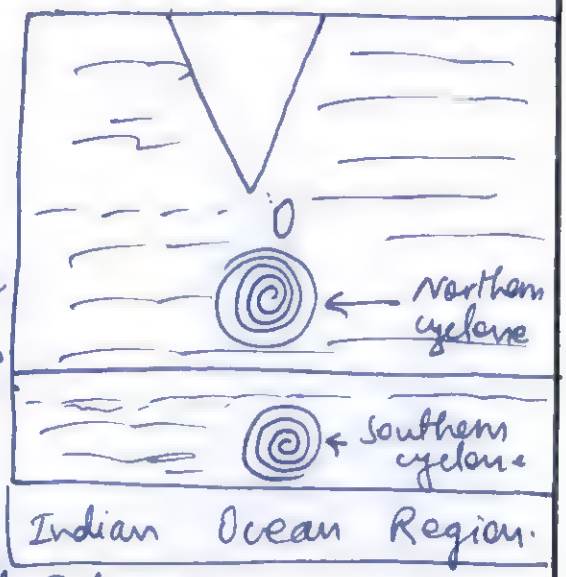
18. What are twin cyclones? Discuss the role of Rossby waves and Madden-Julian Oscillation (MJO) in their formation. **(250 words) 15**

जुड़वाँ चक्रवात (ट्विन साइक्लोन) क्या होते हैं? उनके निर्माण में रॉस्बी तरंगों और मैडेन-जूलियन दोलन (MJO) की भूमिका की विवेचना कीजिए।

As per IMD, twin cyclones are the interplay between wind & monsoonal pattern and earth's rotation causing cyclone formation at Northern and Southern Hemisphere. Eg Asana and Karim cyclone respectively.

Formation

(i) Winds from both Northern & Souther Hemisphere converge



(ii) Role of Rossby Waves and Madden Julian Oscillation [MJO].

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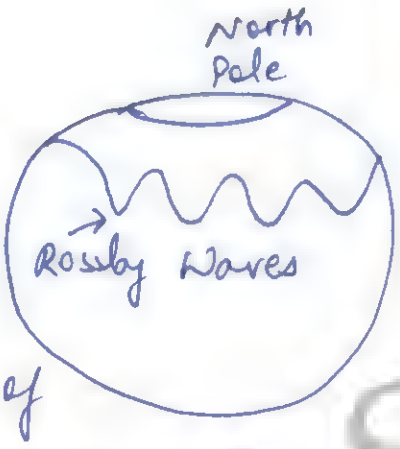
Rossby Waves



These are deflected cold waves from Northern poles which reduces temperature of the region. ex USA region rossby waves.

It has diameter upto 4000-5000 Km.

Role of Rossby Waves & MJO

(I) Interplay of wind and monsoon pattern's as Rossby waves interact with the monsoon. creating cyclone in Northern Hemisphere.

(II) Interplay of MJO with the

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equatorial winds → causing cyclone on southern hemisphere.

(iii) Strengthens : the wind velocity and creates low pressure area.

(iv) Convergence of winds : from high pressure area causing movement and formation of cyclone.

Recently, Twin cyclone was observed in Indian Ocean region. These gets further aggravated due to climatic change and climatic induced phenomenon.

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19. Since independence, planning strategies for women's upliftment has evolved from welfare to development to empowerment. Elucidate. Also, discuss the role played by voluntary organizations in this context.

(250 words) 15

स्वतंत्रता के पश्चात, महिलाओं के उत्थान के लिए नियोजन रणनीतियां कल्याण से लेकर विकास और सशक्तीकरण तक विकसित हुई हैं। स्पष्ट कीजिए। साथ ही, इस संदर्भ में स्वयंसेवी संगठनों द्वारा निभाई गई भूमिका की भी विवेचना कीजिए।

India has come a long way to empower 'modern women' in India and has adopted concrete measures.

Eg of women development in literacy rate increased from 20% in 1951 to 65% [census 2011]

~~Intf~~ Planning Strategies

1. Starting Phase & Welfare measures -

1.1. Giving rights to women through ~~HMA~~ Hindu Marriage Act- etc.

1.2. Article 15, Article 47 etc. to prevent discrimination, nutritional requirements etc.

1.3. Abolishing Sati Pratha, Female

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Infanticide etc.

2. Developmental measures :

2.1. Involvement of women in leadership position. [eg] 73rd & 74th CAA, 33% reservation.

2.2. Gender Budgeting : to allocate specific amounts for their development [1.71 lakh crore in budget 2022-23]

2.3. Start-up India : developing Entrepreneurship attitude.

2.4. Education opportunities through Beti Bacha, Beti Padhao etc.

3. Empowerment Measures :

3.1. Women's rights : [eg] Inheritance Rights, 498A cruelty etc.

3.2. Work culture promotion through POSH Acts etc.

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3.3. Sexual & Reproductive rights and Autonomy [ex] MRTP Act. etc.

~~3.4~~ 3.4. SHG linkages : women empowerment

~~Role~~ [ex] Jeevika, Shakti etc.

Role of Voluntary Organization :-

(i) To provide grievance redressal mechanism.

(ii) Women Empowerment through SHGs, women's rights etc.

(iii) Micro-finance : to give financial autonomy to women. [ex] NABARD linkages etc.

(iv) legal aid : provided by various NGOs. [ex] Sahyog legal clinic.

(v) Grassroot involvement

Thus, ~~tapping~~ empowering the women's ~~potential~~ can truly establish a rule-based, just and egalitarian society.

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20. How far do you agree with the view that globalisation has aggravated the challenges faced by the poor in India? **(250 words) 15**
आप इस विचार से कहां तक सहमत हैं कि वैश्वीकरण ने भारत में निर्धनों द्वारा सामना की जाने वाली चुनौतियों को और बढ़ा दिया है?

Globalization is the cross-fertilization of ideas, goods & services making the world as 'global village'.

Globalization & Aggravating the challenges faced by poor

(i) Class-based society - based on financial status → class based discrimination.

(ii) Large MNCs & affecting the business of small retailers → pushed to poverty.

(iii) Import of Goods & lowering of price → extinction of cottage industries → poverty increases.

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(iv) Globalization → Skewed urbanization → development of slums → perpetuates poverty. [ex] Dharavi Slums, Mumbai.

(v) Technological gap & Infrastructural challenges :- Poor with limited opportunity → perpetuates digital divide.

→

Globalization :- Mitigating the challenges faced by poor

(i) Globalization → Increased opportunity of education → More empowerment.

(ii) Increased employment opportunities :- upward mobility to poor people

(iii) Globalization → Urbanization → increased standard of life with increase in income.

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(iv) Healthcare facilities & reducing out-of-pocket expenditure → prevents poverty.

(v) Globalization → More money to government → welfare measures → mitigates poverty.

Way forward

(i) Globalization should be looked positively → increasing opportunities for everyone.

(ii) Pulling poor from multi-dimensional poverty as 25% Indians are still poor [NITI Aayog Report].

Globalization is a double-edged sword whose potential should be tapped effectively.

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GENERAL STUDIES (TEST CODE : 1840)

Name of Candidate	Sumit Kumar Gupta		
Medium Eng./Hindi	English	Registration Number	936769
Center	Lucknow	Date	04/09/2022

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
2	10	
3	10	
4	10	
5	10	
6	10	
7	10	
8	10	
9	10	
10	10	
11	15	
12	15	
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16	15	
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18	15	
19	15	
20	15	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
   उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न–पत्र कोड, विद्यार्थी क्रमांक आदि)।
2. There are **TWENTY** questions printed in **ENGLISH & HINDI**
   इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
3. **All questions are compulsory.**
   सभी प्रश्न अनिवार्य हैं।
4. The number of marks carried by a question/part is indicated against it.
   प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
5. Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other that the authorized one.
   प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न–सह–उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
6. Word limit in questions, if specified, should be adhered to.
   प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off
   उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

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Plot No. 857, 1st Floor, Banda Bahadur Marg (Opp Punjabi Bagh Station), Dr. Mukherjee Nagar, Delhi-110009

EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

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1. While fixed-term employment offers an ingenious way to address specific issues faced by both employers and employees, there are also some concerns associated with it. Discuss in the context of India.

(150 words) 10

हालांकि, नियत अवधि का रोजगार (फिक्स्ड टर्म एम्प्लॉयमेंट) नियोक्ताओं और कर्मचारियों दोनों के द्वारा सामना किए जाने वाले विशिष्ट मुद्दों को हल करने का एक सरल तरीका प्रदान करता है, लेकिन इसके साथ कुछ चिंताएं भी जुड़ी हुई हैं। भारत के संदर्भ में चर्चा कीजिए।

The Industrial Relation Code, 2020 defined fixed term employment for a specific period of time, i.e. contracted terms and period.

Addressing specific issues

1. Employers

1.1. Availability of large pool of workers.

1.2. Cost-cutting and profit making endeavours to small industries.

1.3. Boost to seasonal employment based on industrial demands.

2. Employees

2.1. Job Availability: as large

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number of jobs would increase.

2.2. Income security - for particular period of time.

2.3. Utilization of skill-set of workers

Concerns Associated

(I) Job security :- will get affected as industrial owners can use hire & fire method.

(II) Social security - of workers will get affected.

(III) Retrenchment - during crisis ex job leaving during Covid-19.

(IV) Owner's will on absorbing workers as permanent workers.

Thus, these needs to be solved to increase the labour force participation which is just 42%.

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2. An efficient logistics sector with a focus on warehousing is pivotal to the success of the Bharatmala Pariyojana. Discuss. (150 words) 10

वेयरहाउसिंग पर केंद्रित एक कुशल लॉजिस्टिक्स क्षेत्रक भारतमाला परियोजना की सफलता के लिए महत्वपूर्ण है। विवेचना कीजिए।

Launched by National Highway Authority of India [NHAI], Bharatmala Pariyojana seeks to connect major cities, ports through roads.

Bharatmala Pariyojana

(I) Connectivity through roads → major ports, cities and hinterland.

(II) Improve logistic and transportation → boost to export sector.

(III) Increased employment opportunities.

Efficient logistics sector

(I) Reduction in time of transportation of goods (es) specially for perishable goods.

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(2) Warehouse :- (2) will help to store good safely

2.2. Development of cold chains to provide longevity Ex vegetables.

2.3. Streamlining the process of transportation of goods Ex e-way Bills for seamless transportation.

(3) Single window clearance to provide seamless licensing regime for transportation.

Steps taken

(i) LEADS Scheme :- to improve logistics. ~~of~~

(ii) Linking FCI - NABARD - FPOs for cold chain developments.

Thus, it will help in reducing transportation time & boosting export.

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3. What do you understand by the term 'irrigation scheduling'? Bringing out the advantages provided by it, discuss the difficulties faced in applying it on a farm level. (150 words) 10

'सिंचाई निर्धारण (इरिगेशन शेड्यूलिंग)' पद से आप क्या समझते हैं? इसके द्वारा उपलब्ध कराये गए लाभों का वर्णन करते हुए, इसे खेत स्तर पर लागू करने के समक्ष आने वाली कठिनाइयों की विवेचना कीजिए।

As per, FAO, irrigation scheduling is a method of scheduling time appropriate for providing water/ irrigation to crops.

Advantages of irrigation scheduling

(i) Reduces water footprint: of crops and save extra water for irrigation.

(ii) Requirement of crops for adequate water gets fulfilled. ex Some crops requires a fixed amount of water to grow.

(iii) Reduces ~~water~~ invisible export of water: As India spends 3300 L of

Don't write anything this margin (इस भाग में कुछ ना लिखें)

water for 1 kg of rice while china spends only 350 L of water.

(iv) Helps in → Increasing ground water
↳ Prevents soil salinity → against excessive irrigation.

Difficulties

(i) Small-farm land : as 85% of the Indian farmers are small or medium [NABARD, 2020]

(ii) Infrastructural gap in scheduling and providing irrigation.

(iii) Information assymetry : as many farmers are unaware regarding it.

(iv) Technological gap : as teledensity is limited in rural areas and internet penetration is low.

Thus, adequate steps should be taken for irrigation scheduling to prevent water crisis.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

4. While the Pradhan Mantri Fasal Bima Yojana was touted as the largest crop insurance scheme globally in terms of farmer participation, various concerns have arisen since its implementation. Discuss. **(150 words) 10**

यद्यपि, प्रधान मंत्री फसल बीमा योजना को किसानों की भागीदारी के संदर्भ में वैश्विक स्तर पर सबसे बड़ी फसल बीमा योजना बताया गया था, तथापि इसके कार्यान्वयन के बाद कई चिंताएं उत्पन्न हुई हैं। चर्चा कीजिए।

PM Fasal Bima Yojana was launched to improve financial inclusion and crop insurance against any agrarian distress faced by farmers.

Features of PMFBY

(i) Farmer's contribution
- → 5% for Horticulture
- → 2% for Rabi crops.
- → 1.5% for Kharif crops

(ii) Centrally sponsored scheme to support and provide financial insurance to farmers.

(iii) Covered wide range of services such as crop failure, monsoonal disruption etc.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Concerns in its implementation

(I) One size fits all approach : by insurance companies → affects customization of financial requirements

(II) Pending cases and failure to provide insurance on time → ~~discourage~~ discourage farmer's participation. [Dalwai committee]

(III) Financial burden on exchequer : as ~~the~~ large part of the premium is given by the government.

(IV) Low Insurance penetration : as only 13% of farmers have availed it [NABARD study paper, 2021]

(V) Regional imbalance : as farmers from Punjab & Haryana have availed it largely.

(VI) Small farm size lands

Thus, these concerns needs to be solved to prevent agrarian distress.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

5. The Stockholm Conference commenced the contemporary "environmental era", which brought a paradigm shift in the environmental governance and set a tone for multi-lateral environmental regime. Discuss. **(150 words) 10**

स्टॉकहोम कॉन्फ्रेंस ने समकालीन "पर्यावरण युग" की शुरुआत की, जो पर्यावरणीय गवर्नेंस में एक आदर्श बदलाव लाया और उसने बहु-आयामी पर्यावरणीय व्यवस्था के लिए एक दिशा प्रदान की। विवेचना कीजिए।

In 1972, the first environment conference took place at Stockholm, thus entering an environmental era.

Paradigm shift in environmental governance:

(I) Environment was incorporated in the legislative Acts of the countries.
Ex Wild Life Protection Act, 1972.

(II) Policy formulation : by keeping environmental impact at forefront.

(III) Environmental Impact Assesment : carried out by various industries before starting a factory.

(IV) Policy to reduce GHG emissions : such as Paris Summit, Net-zero emission, Glasgow Summit etc.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Multi-lateral Environmental Regime :

(i) Multiple summit for environment.
ex Earth summit, 1992, WSDS, Rio+20 etc.

(ii) Countries collaboration : for cooperation in environment & renewable energy consolidation ex ISA summit (2015).

(iii) Several Conventions : to contain environmental pollution ex Basel Convention against transboundary Hazard, Rotterdam Convention etc.

(iv) Sustainable Development regime to mitigate damage & adopt best practices ex SDG, 2030 etc.

Thus, Norman Myers set the tone for 'environmental era' which includes sustainable development and safe environment.

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6. The world has witnessed a huge surge in climate-induced disasters, which are largely driven by anthropogenic factors. In this context, analyse the role of early warning systems in mitigating the impact of the disasters.
(150 words) 10

विश्व में जलवायु-प्रेरित आपदाओं में अत्यधिक वृद्धि हुई है, जो बड़े पैमाने पर मानवजनित कारकों से प्रेरित हैं। इस संदर्भ में, आपदाओं के प्रभाव के शमन में पूर्व चेतावनी प्रणालियों की भूमिका का विश्लेषण कीजिए।

IPCC in its Sixth Assessment Report has warned about the sixth mass extinction due to climate disasters.

Climate induced disasters

(i) Heat waves : both Marine & land eg Heat waves in American & EU countries

(ii) Twin cyclone problems : ~~which~~ due to Rossby waves & MJO → causing havoc. ; Also flash floods etc.

(iii) UV radiation : from the ozone hole ; Glacial Outburst etc.

Anthropogenic factors
- Industrial effluents
- Land-use pattern change
- failure in following sustainable way.
- High GHG emission

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Role of Early Warning System :

(i) Predicting the climatic changes
[ex] Cloud burst at Chamoli → EWS saved many lives (2021).

(ii) Displacing people to safe space :
[ex] During cyclone Fani, Odisha. (2021)

(iii) Formulating policies beforehand by the government [ex] during Chennai flood (2021).

(iv) Developing infrastructure [resilient] to counter these disasters [ex] IRIS & CDRI collaboration.

Way Forward
- → Reduce GHG emission
- → Policies like NDMA
- → Collaboration with NGOs etc. ~~to~~ during crisis.

Thus, multi-pronged approach can mitigate the impact of disasters.

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7. Critically examine the implications of leveraging technology in policing. (150 words) 10

पुलिस व्यवस्था (पुलिसिंग) में प्रौद्योगिकी का लाभ उठाने के निहितार्थों का समालोचनात्मक परीक्षण कीजिए।

Use of Information, Communication and Technology [ICT] can revolutionize the policing in India.

Uses of ICT in policing

(i) Tracking down criminal activities through ICT.

(ii) Facial identifier smart camera : to nab criminals & terrorists.

(iii) Safety to women : against any miscreants [eg] MO SATHI App of Odisha.

(iv) Prevent crimes : through mapping and identifying the wrongdoers.

Implications of leveraging Technology

(i) SMART Policing : in improving

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the efficiency of police service.

(ii) Improves Transparency & Accountability in the Police department

(iii) Safety to everyone against changing nature of cyber crimes.
Ex Cyber-safe women.

(iv) Preventive mechanism and ease of nabbing criminals Ex Criminal Identification Bill, 2022.

(v) Faster dissemination of information
Ex FASTER app of Supreme Court

Concerns
- Misuse by Police force
- Data privacy & storage
- Cyber security
- Lack of regulatory measures

Hence, ICT should be utilized for effective policing to increase vigilance.

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8. How far do you agree with the view that climate change poses a threat to international peace and security? (150 words) 10

आप इस विचार से कहाँ तक सहमत हैं कि जलवायु परिवर्तन अंतर्राष्ट्रीय शांति और सुरक्षा के लिए खतरा है?

Experts predicts that climate change and its subsequent fallout can become a cause for third-world-war.

Climate changes : threat to International peace & security :-

(I) Loss of natural resources : leading to tussle among countries. [ex] Japan & China over fishing zone.

(II) Imposition of climate-induced restrictions on developing countries.

(III) Water scarcity & water security :- in many countries jeopardizes the flow of river [ex] Dam on Nile river

(IV) Claim over lands due to climatic importance.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(v) Refugee crisis : as it will increase international migrants.
Ex Bangladeshi refugees due to submergence of its coast.

(vi) Tussle over mitigating steps by countries Ex Net zero goals → China - 2060, India 2070, EU - 2050.

Way forward

(i) Common but differentiated responsibility as propagated by India.

(ii) Use of multilateral forums to solve disputes Ex China / Japan over Senkaku Islands.

(iii) Climate mitigation steps :- Glasgow summit, Paris Summit, Technology transfer, $100 bn packages etc.

Thus, environmental concern should be solved at the earliest for survival of humanity.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

9. What do you understand by a virtual private network (VPN)? Highlight its advantages and discuss the concerns posed by it. (150 words) 10

वर्चुअल प्राइवेट नेटवर्क (VPN) से आप क्या समझते हैं? इसके लाभों पर प्रकाश डालिए और इससे उत्पन्न चिंताओं पर चर्चा कीजिए।

National Technical Research Organization [NTRO] defines VPN as the uses of world wide web [WWW] in private network against state's vigil.

Advantages of VPN

(i) Accessability & to large number of app → increases internet utility.

(ii) Protects Individual data & as privacy is a concern [under Article 21, highlighted in Puttaswamy Judgment]

(iii) Cyber security & as issues of virus, pegasus, ransomware etc. gets limited.

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(IV) Individual Autonomy : regarding the uses of internet.

Concerns posed by VPN

(I) Uses for Organized crimes : such as drug trafficking, human trafficking, money laundering etc.

(II) Uses for non-state actors : such as terror funding, spread of terrorist ideology etc.

(III) For cyber security threat [Eg] Black-out in Mumbai [2021] → alleged VPN involvement.

(IV) Against State vigil : promotes child pornography etc. [Eg] Bulli Bai App etc.

Thus, VPN is a double-edged sword whose utility can be utilized for internet penetration.

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10. The discovery of the Higgs Boson at the Large Hadron Collider in CERN completed 10 years recently. In this context, discuss the role played by CERN in overall scientific development. (150 words) 10

सर्न (CERN) स्थित लार्ज हैड्रॉन कोलाइडर में हिग्स बोसोन की खोज को हाल ही में 10 वर्ष पूरे हो गए हैं। इस संदर्भ में, समग्र वैज्ञानिक विकास में सर्न द्वारा निभाई गई भूमिका पर चर्चा कीजिए।

Higgs boson, also know as, God Particle has given some ground-breaking revelations regarding origin of universe.

Role played by CERN

(i) God particle & insight on the evolution of universe.

(ii) Identification of sun-spots and the fusion capability to enhance energy security, if successful.

(iii) Climatic change effects such as Ozone hole, etc.

(iv) Evolutionary revelations & such

Don't write anything this margin (इस भाग में कुछ ना लिखें)

as origin of stars, planetary motion, Galaxy formation etc.

(v) Understanding the formation of stars through nebula and further solidification.

(vi) Identifying Asteroid belts and its mineral utility for the Common Heritage of mankind.

Thus, CERN has helped immensely towards scientific development.

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11. Highlighting the factors that affect the cropping pattern in India, discuss the need for modifying it in the context of the emerging agro-ecological concerns. **(250 words) 15**

भारत में फसल पद्धति को प्रभावित करने वाले कारकों पर प्रकाश डालते हुए, उभरती कृषि-पारिस्थितिकी चिंताओं के संदर्भ में इसे संशोधित करने की आवश्यकता पर चर्चा कीजिए।

Cropping Pattern refers to the way crops are grown and changed as per suitable agoro-climatic conditions [FAO].

Factors affecting cropping pattern

(i) Climate & climate induced phenomena changes the cropping pattern.

(ii) Monsoon :- as rainfed ~~co~~ regions grow water efficient crops such as Barley, Bajra etc.

(iii) Availability of infrastructural facilities such as cold-chain, warehouse etc.

(iv) Water Availability :- as water induces growing crops such as

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rice, wheat etc.

(v) Connectivity & transportation :- as horticulture & perishable goods are grown accordingly.

(vi) Soil :- as alluvial soil etc. attracts water intensive crops.

Need for modification

(i) Water scarcity & groundwater depletion :- as Punjab & Haryana has witnessed lowering down of their water table.

(ii) Rainfed crops :- needs to be promoted [ex] Millets, International Year of Millets, 2023 to encourage millets farming.

(iii) Prevent Agrarian distress :- due to disruption in monsoonal rainfall.

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(iv) Crop Diversification : as Indian agricultural system is skewed towards 'Rice-wheat' system.

(v) Prevent Salinity & soil infertility : as excessive usage of NPK has been observed. 8 : 3 : 1.

(vi) Better & effective utilization of limited land resources [ex] National Palm Oil Mission of NE areas.

Way ahead

(i) Encourage crop diversification :- through ISOPOM, TOP scheme etc.

(ii) FPO - FCI - NABARD linkages to develop cold storage facilities.

(iii) Behavioural changes and crop insurance facilities [ex] PM Fasal Bima.

Thus, better utilisation can ensure effective uses of 60% of human resources engaged in agricultural activities

Don't write anything this margin (इस भाग में कुछ ना लिखें)

12. While the budgetary reforms undertaken by the Central government in recent years have led to better management of government expenditure, there are some issues that still need redressal. Discuss. **(250 words) 15**

जहाँ हाल के वर्षों में, केंद्र सरकार द्वारा किए गए बजटीय सुधारों के कारण सरकारी व्यय का बेहतर प्रबंधन संभव हुआ है, वहीं कुछ ऐसे भी मुद्दे विद्यमान हैं जिनका समाधान किया जाना अभी बाकी है। विवेचना कीजिए।

Despite the Covid-19 pandemic and subsequent economic slowdown, India's current Account deficit is 6.8% as per budget 2022-23.

Budgetary Reforms undertaken

(I) FRBM Act and the limitations imposed by it are tried to be inculcated. ex 3.5% ~~CAD~~ Fiscal Deficit.

(II) Fiscal consolidation and fiscal prudence : undertaken by the government.

(III) Reduced allocation towards MPLADS funds : to save money for Covid-19 pandemic.

(IV) Austerity measures : by the government officials.

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(v) Zero budgeting idea :- to ~~stor~~ give proper reason for financial allocation for projects etc.

(vi) CAG Reports :- to encourage transparency & zero tolerance towards any corruption.

(vii) Rationalization of subsidies and weed out ghost beneficiaries.

Issues which needs redressal

(i) failure to achieve FRBM target: as pointed by N. K. Singh Committee

(ii) DISCOMs bleeding out exchequer's money of states etc.

(iii) Recapitalization of loss-making PSUs affects financial resources

Ex ₹1.64 lakh crore package to BSNL.

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(iv) Non-lapsable funds of several ministries creates lethargicity → affects economies of scale.

(v) Rationalization of budgetary allocation : towards better fiscal consolidation.

Way forward

(i) Strategic Disinvestment of loss-making PSUs [NITI Aayog].

(ii) Increased investment in capital expenditure to encourage returns on assets. [Budget 2022-23].

(iii) National Monetization Plan : to increase revenue of the government.

Thus, proper utilisation of budget can help India become $5 trillion economy by 2025.

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13. For India to create a 'future ready' railway system, it must harness innovation and resource efficiency. Discuss the statement in the context of the measures enlisted in the National Rail Plan 2030. (250 words) 15

भारत को 'फ्यूचर रेडी' रेलवे प्रणाली के सृजन हेतु, नवाचार और संसाधन दक्षता का उपयोग करना चाहिए। राष्ट्रीय रेल योजना 2030 में सूचीबद्ध उपायों के संदर्भ में इस कथन की विवेचना कीजिए।

Indian Railways is fourth largest railways in the world having 21,000 trains carrying 13 million passengers daily [Annual Report, Railway Ministry]

National Rail Plan, 2030

(i) to convert narrow gauge railway track to broad-track by 2030.

(ii) Electrification of railways → shift from diesel engine to promote efficiency.

(iii) Smart Platforms : to increase service delivery to customers.

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(iv) Involvement of Private sector :- to improve innovation and enhance customer experience.

(v) Provide High speed rail connectivity.

(vi) Safe passage :- and avoid railways accident to zero by 2030.

Steps already taken towards future ready railway system :-

(i) KAVACH :- to prevent any accidents of railways → developed by DRDO.

(ii) National Railway Plan :- to build bridges and safety routes to rail. [eg] Electrocution fencing

VisionIAS

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to avoid any animal encroachment

(iii) Satellite imagery uses to increase mass surveillance of railway system.

(iv) Uses of GIP / GPS and remote sensing to prevent any accidents and provide real time tracker of railways.

Way ahead

(i) Piecemeal approach towards privatization → Innovation
→ Resource utilization
→ Efficiency.

(ii) Modernize Railways by adopting best practices.

Thus, the modernization & innovation plan of Vivek Debroy Committee can be adopted.

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14. Discuss the significance of technology in the Indian agricultural sector. Also, state the challenges in realising its potential to improve agricultural efficiency and increase the income of the farmers. **(250 words) 15**

भारतीय कृषि क्षेत्रक में प्रौद्योगिकी के महत्व पर चर्चा कीजिए। साथ ही, कृषि दक्षता में सुधार और किसानों की आय बढ़ाने की इसकी क्षमता का उपयोग करने में आने वाली चुनौतियों का भी उल्लेख कीजिए।

Ashok Dalwai Committee highlighted the importance of technology in agriculture to double the income of farmers.

Significance of Technology

① Providing market to agricultural produce :- (1.1). e-NAM portal for connecting farmers & businessman

(1.2) One nation, one market portal :- for realizing price of farmer's produce.

② Pre-sowing period :-

2.1. Soil Health card - to assess the soil condition and advising

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on subsequently.

2.2. Kisan TV to disseminate information.

2.3. Use of satellite imagery and remote sensory to predict rainfall and suggest crops accordingly.

(3) During cropping period :-

3.1. Uses of Drones for spraying of seeds, water, fertilizers etc.

3.2. Security of crops by using technology.

(4) After harvesting :-

4.1. Connecting & storing in the cold-storage and warehouse → Geo-tagging to avoid any discrepancies

4.2. Crop Insurance :- assessment carried by companies and help in providing insurance money.

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Challenges towards agricultural effuiency and farmer's income :

(i) Infrastructural gap : as there is low ~~int~~ teledensity and tower connectivity.

(ii) Technological gap : towards e-NAM portal or other portals.

(iii) Failure in collecting correct data : technological glitch in soil health cards. etc.

(iv) Cyber fraud and issues of data security.

Way forward
- → encourage adoption of ICT
- → Technological development
- → Behavioural changes.

Thus, these measures can ensure doubling farmer's income.

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15. Despite the digital transformation in the Public Distribution System (PDS) in India, several challenges still remain. Elaborate. Also, suggest measures to address them. (250 words) 15

भारत में सार्वजनिक वितरण प्रणाली (PDS) में डिजिटल रूपांतरण के बावजूद, अभी भी अनेक चुनौतियां विद्यमान हैं। सविस्तार वर्णन कीजिए। साथ ही, इनके समाधान हेतु उपायों का सुझाव दीजिए।

Digital transformation in PDS has ~~transformed~~ ~~the~~ revolutionised the distribution of welfare ~~food~~ measures in India.

Advantages

(i) to weed out the ghost beneficiaries. ex PM Awas Yojana.

(ii) Identification of BPL families → targetted delivery of ration etc.

(iii) Uses of JAM trinity for Direct Benefit Transfer ex during Covid.
↳ Avoid leakages of resources.

Challenges in PDS

(i) Low digital & internet penetration in rural areas → affects the

Don't write anything this margin (इस भाग में कुछ ना लिखें)

overall functioning.

(ii) Issue of Corruption :- as licence holders takes ~~we~~ bribe before allocating name in BPL.

(iii) Fake BPL card-holders :- which takes benefits unnecessary.

(iv) Technological glitch and gap → sometimes leave out the beneficiary name.

(v) PDS distribution of migrants worker : is still limited in few pocket region.

(vi) ~~Financial~~ lack of financial inclusion : through Jan-Dhan account.

(vii) leakages in PDS : as audit functioning is limited.

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Measures to address them

(i) One nation, one Ration card to solve the problems of migrants workers.

(ii) Increased financial inclusion → Bank accounts etc.

(iii) Audit functioning of PDS to avoid any leakages.

(iv) Penal provision for miscreants and corruption.

(v) Digital Penetration through Bharat net, PM WAANI etc.

Thus, multidimensional approach can realize NFSA, 2013 and envision inclusive India.

VisionIAS

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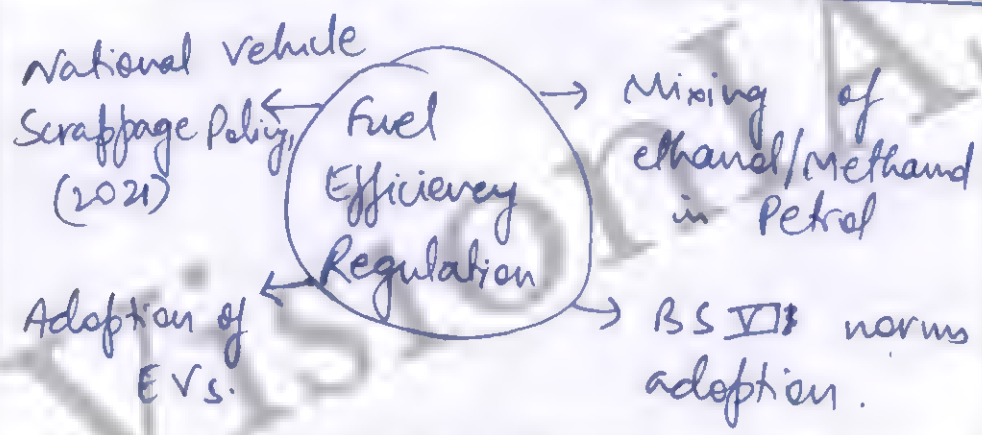
16. Discuss the various concerns that exist with regard to fuel efficiency regulations for vehicles in India. Also, suggest the measures that can be taken in this regard. **(250 words) 15**

भारत में वाहनों के लिए ईंधन दक्षता विनियमों के संबंध में विद्यमान विभिन्न चिंताओं पर चर्चा कीजिए। साथ ही, इस संदर्भ में किए जा सकने वाले उपायों का भी सुझाव दीजिए।

Recently, India adopted BS VI norms to mitigate climate change and improve fuel efficiency.



Concerns regarding fuel efficiency

(i) Fuel inefficient vehicles → promotes wastage of money.

(ii) Companies not following the fuel efficiency regulations.

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(iii) Lack of oversight to increase fuel efficiency in vehicles.

(iv) Environmental concern : as it increases GHG emission.

Measures that can be taken

(i) NITI Aayog Ethanol & Methanol economy : to increase efficiency by adding catalyst and other materials.

(ii) Adoption of EVs. : to increase efficiency of vehicles.

(iii) Discard old vehicles : to improve fuel efficiency.
eg vehicle scrappage policy.

(iv) Promote innovation : through Atal Incubation centre regarding

Don't write anything this margin (इस भाग में कुछ ना लिखें)

fuel efficiency improvement.

Way ahead

(i) Adopt Best practices of other countries [eg] EU's regulation on fuel efficiency.

(ii) Infrastructural development & technology transfer of developed countries.

Thus, this can ~~ehan~~ enhance fuel efficiency for vehicles in India.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

17. Urban fire is becoming a serious cause of concern in Indian cities. In this context, highlight the major causes behind urban fires in India. What steps can be taken to build robust fire resilience in Indian cities? **(250 words) 15**

शहरी आग (अर्बन फायर) भारतीय शहरों में चिंता का एक गंभीर कारण बनती जा रही है। इस संदर्भ में, भारत में शहरी आग के प्रमुख कारणों पर प्रकाश डालिए। भारतीय शहरों में मजबूत अग्नि रोधी क्षमता के निर्माण हेतु क्या कदम उठाए जा सकते हैं?

As many as 7,368 fire incidents took place in one year [NCRB 2020].

Cause of concern
- → Loss of property.
- → Loss of Human resource
- → discourage urban developments.
- → lack of safety in urban cities

Major causes behind urban fires

(I) Compacted & unplanned development of urban cities → increased vulnerabilities to fire.

(II) Lax implementation of Building Code while constructing any buildings, industry. etc.

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(iii) Lack of safety measures : and equipments in the building → goes against the mandate of building Code, 2016.

(iv) Unregulated industrial developments and poor ventillation → may cause fire to break-out easily.
Ex Uphaar tragedy.

(v) Urban Heat Island effect due to heat waves & climate change.

Steps to build Robust fire resilient cities :

(1) National Building Code, 2016 should be followed strictly ~~to~~ while construction.

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(II) Expert Assessment : regular checks by experts on following of the fire-safety measures.

(III) Planned development of cities to avoid fire incidents. Ex Delhi Master Plan, 2041.

(IV) Fire safety regulation and equipments should be updated.

(V) Fire brigade : robust fire safety department can reduce spread of urban fire.

(VI) Penal Provision for wrongdoers of not following such regulations.

Thus, planned cities can realise SDG 11 regarding sustainable cities and avoid urban fire.

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18. Drones in border areas present a serious threat for border management in India. Elaborate. Also, discuss the different measures taken to regulate the use of drones in India. **(250 words) 15**

सीमावर्ती क्षेत्रों में ड्रोन, भारत में सीमा प्रबंधन के समक्ष एक गंभीर खतरा उत्पन्न करते हैं। सविस्तार वर्णन कीजिए। साथ ही, भारत में ड्रोन के उपयोग को विनियमित करने के लिए किए गए विभिन्न उपायों पर चर्चा कीजिए।

Recently, drone carrying bombs were deciphered and neutralized by the Indian armed forces in Uri-sector.

Drone : threat for border management

(i) Surveillance : regarding key army base → makes them vulnerable towards attack.

(ii) Planting of bombs : through drones become easier → as lack of human involvement directly.
eg Incidents at J & K borders.

(iii) Smuggling of drugs : and other narcotic substances through

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borders → affects the working of border management forces.

(iv) Supplying arms to militants : as drones can carry rifles etc. and deliver them to desired locations.

Measures taken for their regulation

(i) Draft Drone Rules, 2021 : has been brought to regulate the working of drones
- → provides for licences
- → Red zone → against flying drones over such area.
- → DGCA permission

(ii) Hyderabad dome drone system :- to decipher unmanned vehicle and neutralize them effectively.

(iii) Surveillance of drones by the

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Indian defence system through radar system.

Way ahead

(i) Technology transfer from countries like Israel for better regulation over drones.

(ii) Finalize draft drone rules at the earliest.

(iii) Collaboration of ISRO – DRDO for surveillance through satellite imagery etc.

(iv) Anti-drone system to neutralize any drone effect.

Thus, drones can be used positively while mitigating the threats posed by them.

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19. Despite a global framework to prevent weaponization of space, it has been increasing in the recent times. Discuss. Also, give an account of the implications of space weaponization. (250 words) 15

अंतरिक्ष के शस्त्रीकरण को रोकने के लिए एक वैश्विक ढांचा होने के बावजूद, हाल के दिनों में इसमें वृद्धि हुई है। चर्चा कीजिए। साथ ही, अंतरिक्ष के शस्त्रीकरण के निहितार्थों का विवरण दीजिए।

Space weaponization can affect the uses of space as 'common heritage of mankind'.

Global framework

(i) Outer space Treaty, 1963 :- it prevents uses of space for any weapons of mass destruction, nuclear arsenal etc.

(ii) Space Regulation :- through convention to not utilize space for any country's disadvantage and prevent weaponization.

Increases of weaponization of space

(i) North Korea testing its missiles

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over space → ~~aff~~ threat to other countries.

(ii) Chinese uses of space for nuclear arsenal and weaponization.

(iii) Recent threat by Russia given during Ukraiman-Russian crisis → use of space to disrupt Ukrain.

Implications of Space Weaponization

(i) Arms-race and weaponization-race by countries in their air-space.
ex witnessed during growing of nuclear weapon during nuclear race.

(ii) Security of states get affected ex China's weaponization may affect India's security.

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(iii) Safe passage of space area :- for satellite launch etc.

(iv) Technological glitch : may affect the loss of human lives by weapon failures at space.

Way forward

(i) Consensus-based formulation of rules to contain weaponization of space.

(ii) Rule-based world order : to provide sanctions against unruly states.

(iii) Better utilization of Space area.

Thus, prevention of weaponization can enhance safety to humanity.

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20. What do you understand by a bio-economy? Highlight the role that the National Biotechnology Development Strategy 2021-2025 can play in creating a robust bio-economy in India. **(250 words) 15**

बायो-इकोनॉमी (जैव-अर्थव्यवस्था) से आप क्या समझते हैं? भारत में एक मजबूत बायो-इकोनॉमी के सृजन में राष्ट्रीय जैव प्रौद्योगिकी विकास रणनीति 2021-2025 द्वारा निभाई जा सकने वाली भूमिका पर प्रकाश डालिए।

~~Bio~~ As per FAO, bio-economy refers to the uses of biological resources for the sustainable economy.

National Biotechnology Development Strategy 2021-25

(i) leverage biotechnology in the economy to improve innovation.

(ii) Encourage adoption of biotechnology in various department

(iii) Sustainable development of economy

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(iv) to improve circular bio technology and uses of nano-technology.

Implications

(i) Better resource utilization.

(ii) Improving efficient resource distribution.

(iii) Robust & resilient economy.

Thus, it will enable India to reach $5 trillion economy.

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